Road to recovery: Assessing job risk and the impact on the most vulnerable in Indonesia’s pandemic-hit tourism industry
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I am delighted to share our findings from the Partnership for Australia-Indonesia Research (PAIR) COVID-19 Rapid Research Series.

As the COVID-19 pandemic spreads, it continues to disrupt economies, jobs, education and health systems worldwide. To address the pressing challenges in Indonesia, we have brought together teams of interdisciplinary researchers from both countries to explore COVID’s impact on people. We focus on three areas: health, connectivity and economic recovery.

The report provides the policy community with timely access to the best available evidence. It also responds to the Australian Government’s Partnership for Recovery strategy. The strategy aims to understand and support Indonesia as it deals with and recovers from the COVID-19 pandemic.

Warm regards,

Dr Eugene Sebastian
PAIR Program Director
The Australia-Indonesia Centre
EXECUTIVE SUMMARY

The tourism sector is a significant driver of Indonesia's economic growth – so important that the country has been trying to open the doors to international tourists in the midst of the coronavirus pandemic. But the latest deadly surge of COVID-19 cases and multiple outbreaks has put an abrupt halt to those plans. As this report finds, many vulnerable people who rely on tourism for their livelihoods are affected most by the ongoing, uncertain situation.

Our research shows that women, young people and lower-educated workers have higher job insecurity in the tourism industry and therefore have become even more economically vulnerable in the pandemic. This report also found that while Bali is the country’s prime tourism destination and has been hardest hit by the loss of visitors, the impact of COVID-19 has been severe in four provinces, accounting for 62 percent of all job losses.

To put the current situation in perspective, in 2019, the year before COVID-19 shut the world’s borders, more than 12 million Indonesians were employed in the travel and tourism sectors. This included workers directly employed and also those working in industry supply chains. The nation attracted 16.1 million international visitors who contributed US$15.8 billion (223 trillion rupiah) to the economy. The value of domestic and international tourism was 5.7 percent of national gross domestic product.

The COVID-19 pandemic has brought unprecedented disruption. In the first nine months of 2020 it has been estimated that Indonesia's tourism industries lost US$14 billion (Rp 202 trillion), leading to a 1.6 percent decline in GDP, a 1.7 percent shortfall in personal income and up to 3.4 million job losses.

Many of those jobs in the tourism industry would have been filled by people from vulnerable and marginalised groups.

Across the archipelago, the collapse of tourism has resulted in 3.1 percent of female workers, 2.7 percent of youth employees, 3.1 percent of lower-educated workers, and 2.3 percent of those in low-income positions facing high levels of job insecurity.

This study provides policymakers with important evidence for making both immediate and long-term strategic decisions on the allocation of government stimulus packages.

The road to recovery requires solidarity and collaboration across the industry and government. This Australia-Indonesia Centre study contributes to this goal by identifying marginalised and vulnerable communities who have been heavily impacted by the tourism decline, so that those who have endured the most economic hardship can be supported and given an opportunity to reclaim their livelihoods.

Ultimately the report makes three key recommendations on government priorities to help policymakers with the recovery from COVID-19.

• **Focusing policymaking on the five most affected regions** to assist with wage compensation, skills training or job relocation, which will provide much-needed support to ensure the livelihoods of those communities.

• **Promoting domestic tourism and community welfare** with a national campaign for local travel that incorporates small-scale or niche tourism options.

• **Formulating a tourism recovery strategy** that brings together all stakeholders that prioritise vulnerable people in their plans for retraining and/or skills building, particularly in the digital economy.
1.0 INTRODUCTION

COVID-19 has severely disrupted the world’s economy. The International Monetary Fund (IMF) estimated the global economy shrank by 3.5 percent in 2020, with a disproportionate effect on the poorest and most vulnerable. Indonesia has not been exempt; its economy contracted 5.32 percent and 3.49 percent in the second and third quarters of 2020 respectively. By October 2020 Indonesia entered a deep recession (Maliszewska et al., 2020).

Tourism has been one of the worst affected industries, due to worldwide restrictions on mobility (Lenzen et al., 2020). The United Nations World Tourism Organization (UNWTO) estimated there were one billion fewer international tourist arrivals in 2020, a 74 percent decline that caused a US$2 trillion loss to world GDP and put 100-120 million jobs at risk (UNWTO, 2020a).

Tourism is an important sector of the Indonesian economy. In 2019, it contributed 5.7 percent of national GDP, and Indonesia attracted 16.1 million international visitors (WTTC, 2020), reporting the highest growth rate among all Southeast Asian countries (Statistics Indonesia, 2020a). Since the coronavirus was first reported in Indonesia in March 2020, the tourism sector has been heavily impacted (Ramadhian, 2020) by large-scale social restrictions (Pembatasan Sosial Berskala Besar or PSBB), travel restrictions and physical distancing. Domestic tourism has been negatively affected, while international tourism remains suspended (Asmara, 2020; Klikwarta, 2020).

Tourism provides employment for skilled and unskilled workers, including groups who may have difficulties finding other jobs. The pandemic has led to an unprecedented increase in unemployment. Australia, the United Kingdom, Thailand and other countries have reported that women, youth and low-income groups have been disproportionately affected, enduring higher unemployment rates and larger pay cuts than their less marginalised counterparts (ABC News, 2020; Henehan, 2020; Lekfuangfu et al., 2020).

The same effects are expected in Indonesia. Of tourism-related jobs in Indonesia, 55 percent are held by women and 17 percent by youth (aged 15-24) (UNWTO, 2019; WTTC, 2019). Women in developing countries have less access to education and perform extensive unpaid work in family tourism businesses (UNWTO, 2020b). Tourism can also help poor women break the poverty cycle through formal and informal employment, entrepreneurship, training and community advancement (UNWTO, 2020b).

“Many women are tourism entrepreneurs, especially in Indonesia. And there are growing numbers of women-owned businesses and community initiatives to provide training and jobs for women (for example, Women in Tourism Indonesia and Wise Step Travel).”

**Figure 1:** The impacts of COVID-19 on tourism jobs in Indonesia.
To mitigate the socioeconomic impacts of this crisis, significant and swift government measures are needed to support the tourism sector. The United Nations World Tourism Organization and the World Travel and Tourism Council have called for strong government support, and one priority is protecting the livelihoods of workers by offering financial assistance to protect workers in severe circumstances. The first step is to “incentivise job retention, support the self-employed and protect the most vulnerable groups” (UNWTO, 2020c). These measures require identifying those who have been impacted most.

This project identified the groups most vulnerable to tourism losses in Indonesia, providing the first-ever quantification of the economic impact of tourism losses. Specific aims are:

- To evaluate how COVID-19 has economically impacted the Indonesian tourism industry and its suppliers
- To identify the most-affected communities across 34 provinces
- To evaluate the employment losses for women, youth, low-education and low-income groups.

**Box 1: Women in Tourism Indonesia**

Women in Tourism is an independent organisation that works to support women in Indonesian tourism. It provides a knowledge and experience sharing platform for women in small, medium and large enterprises. The organisation promotes gender equality, raises public awareness and assists women through network activities.

**Box 2: Wise Step Travel**

The company offers thematic, customised and responsible journeys for groups or individual travellers within Indonesia. It promotes educational activities and fosters deeper appreciation for cultures and local communities. It supports sustainable tourism.

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2.0 METHODOLOGY

This study employed a multi-regional input-output (MRIO) model, a valuable tool for analysing economic impact and supporting related policies. An MRIO model uses a matrix to capture inter-industry linkages across regions and sectors (Kitzes, 2013; Leontief, 1970), producing two distinct benefits. First, it evaluates both direct and indirect effects of tourism losses – for instance, how a 2 million drop in Chinese travellers in 2019 led to job losses in the accommodation sector and related suppliers (Sun & Pratt, 2014). Secondly, MRIO traces inter-regional transactions and links labour inputs with socio-demographic characteristics. The reduced spending from Australian tourists, for example, can be seen in the job losses for female employees in West Java, Jakarta or East Kalimantan. This allows identification of regions and groups most vulnerable to tourism losses.

The first step was estimating the decline of tourism expenditure, using 2019 as a baseline and assuming demand would have been unchanged without the pandemic. We compared domestic and international tourism volume in the January to September 2020 period with the same period in 2019 to estimate the effect of the COVID-19 pandemic. The time frame was determined based on data availability.

Arrivals records showed the decline in international visitors, with drops in revenue derived by multiplying average visitor spending (sourced from the Indonesian Ministry of Tourism and Creative Economy) by reduced visitor volume. Across Indonesia’s 34 provinces, reduced tourism receipts were estimated across eight categories: accommodation, food and beverage, local air transport, other local transport, shopping, souvenirs, recreational services, and others.

No official data on domestic tourism were available for our study period, so the classified hotel occupancy rate was used as a proxy for demand, assuming hotel customers would represent the composition of international and domestic tourists before and during the pandemic. By combining information on hotel occupancy and international visitor numbers, we derived approximate figures for domestic tourist journeys. Reduced spending from domestic tourism was then gauged by combining estimated reduced volume with the spending profile, provided by the Indonesian Ministry of Tourism and Creative Economy.

The MRIO model

We estimated the impact on 34 Indonesian provinces using the MRIO framework, allowing us to track connections between sectors and across regions, which is essential to assessing the spillover effects of reduced tourist spending. This study used 2019 provincial gross domestic product (GDP) data published by Statistics Indonesia (Statistics Indonesia, 2020b). The MRIO tables consisted of 17 sectors for 34 provinces for 2019, due to data availability. Table 1 shows the 17 sectors in the Indonesian economy and those that are directly affected by a fall in tourist volumes and spending.

Table 1: Indonesian MRIO sectors in relation to sectors with reduced tourism spending (items).

<table>
<thead>
<tr>
<th>No.</th>
<th>Indonesian MRIO sectors</th>
<th>Sectors with reduced tourism spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agriculture, forestry and fishing</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Mining and quarrying</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Manufacturing</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Electricity and gas</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Water supply and waste management</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Construction</td>
<td>-</td>
</tr>
<tr>
<td>7</td>
<td>Trade</td>
<td>Shopping, souvenirs</td>
</tr>
<tr>
<td>8</td>
<td>Transportation and storage</td>
<td>Transportation, local air transport, other local transport</td>
</tr>
<tr>
<td>9</td>
<td>Accommodation and food service activities</td>
<td>Accommodation, food, beverage, and tobacco</td>
</tr>
<tr>
<td>10</td>
<td>Information and communication</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Financial and insurance activities</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>Real estate activities</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Business activities</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>Public administration</td>
<td>-</td>
</tr>
<tr>
<td>15</td>
<td>Education</td>
<td>-</td>
</tr>
<tr>
<td>16</td>
<td>Health and social work activities</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>Other services activities</td>
<td>Recreational and cultural services, other tourism services, others</td>
</tr>
</tbody>
</table>

To estimate the impact of COVID-19 on employment in the tourism sector, we used the National Labour Survey (Sakernas) of February 2020, the most recent available at the time of this study. This survey covered about 75,000 households, and the data were used to construct an employment satellite account for the MRIO, allowing us to examine the effects of COVID-19 on the tourism industry in the following categories:

- economic sector
- gender, with particular emphasis on women
- age, with particular emphasis on the youngest quintile
- level of education, with particular emphasis on those who attained elementary school or less
- level of income, with particular focus on the lowest income quintile.
3.0 ANALYSIS AND RESULTS

3.1 TOTAL IMPACT

International tourism. In 2019, there were 14.92 million international visitors to Indonesia, with 12.1 million arrivals from January to September. While numbers were strong at the beginning of 2020, arrivals dropped drastically after March as COVID-19 related restrictions were imposed. Indonesia hosted fewer than 200,000 inbound visitors from May to September, and total international visitors from January to September 2020 were about 3.56 million, 70.57 percent below the baseline (2019).

This reduction of 8.54 million international travellers resulted in a total loss of international tourism revenue of Rp 129.45 trillion (US$9.25 billion, Table 2). The accommodation sector experienced the largest losses, with an estimated revenue reduction of Rp 56 trillion (43 percent, US$4 billion), followed by the food and beverage sector, Rp 25.5 trillion (20 percent, US$1.82 billion) and shopping/souvenirs, Rp 18.8 trillion (15 percent, US$1.34 billion).

The distribution of inbound travellers across the 34 provinces was found to be uneven. Foreign travellers strongly favoured destinations in six provinces: Bali, Jakarta, Kepulauan Riau, West Java, Yogyakarta and East Java; 33 percent and 22 percent of international tourists visited Bali and Jakarta, respectively. When inbound tourism collapsed, these provinces experienced the greatest economic shock. Table 3 shows about 40 percent of international tourism revenue losses occurred in Bali, followed by Jakarta (22 percent) and Kepulauan Riau (7 percent). The economies of West Nusa Tenggara, Bali, Kepulauan Riau, East Kalimantan and West Kalimantan were found to be most dependent on the international market, which accounted for more than 75 percent of their tourism losses. These destinations have been much more economically vulnerable to the COVID-19 pandemic.

Domestic tourism. To estimate the reduction in domestic tourism demand, we used the classified hotel occupancy rate as a proxy for changes. The occupancy rate was 52.3 percent from January to September 2019, but dropped to 30.1 percent during the same period in 2020. Using international arrival data, domestic volume required to maintain a 30.1 percent occupancy was calculated.

We estimated domestic tourism in January to September 2020 was reduced by 100 million trips from the 2019 baseline of 212 million, representing a 47 percent decline. Estimated reduced domestic tourism receipts were Rp 72.4 trillion (US$5.17 billion, Table 3). Most losses were in the areas of transport (Rp 23 trillion, 32 percent), food and beverage (Rp 22 trillion, 31 percent), and shopping/souvenirs (Rp 16 trillion, 22 percent).

The distribution of domestic trips differed from inbound tourism, with a relatively even distribution across 34 provinces. East Java, Jakarta, West Java, Central Java, Bali and Yogyakarta led the way. These provinces experienced higher losses from the domestic market’s contraction.

Total tourism losses. Compared with January-September 2019, the tourism industry experienced an estimated total loss of 201.85 trillion rupiah (US$14 billion). The collapse of international travel accounted for two-thirds of the losses. Overall, the accommodation sector was most affected (down 61 trillion rupiah or US$4.4 billion), accounting for 30 percent of the spending shortage, followed by food and beverage (24 percent, 48 trillion rupiah or US$3.4 billion), and transport (18 percent, 37 trillion rupiah or US$2.6 billion). Regionally, Bali experienced the biggest loss (55 trillion rupiah), followed by Jakarta (40 trillion rupiah), East Java (19 trillion rupiah), West Java (18 trillion rupiah) and Central Java (12 trillion rupiah). Bali alone accounts for 27 percent of the national total tourism losses. Because tourism contributes 46 percent of Bali’s GDP and the province has seen a rapid expansion of inbound tourism demand over the years (Law et al., 2016), Bali has been the epicentre of the tourism crisis during the COVID-19 pandemic.
Table 2: Reduced tourism spending by sectors, January to September 2020 (unit: billion Rupiah).

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Accommodation</th>
<th>Food and beverage</th>
<th>Transport</th>
<th>Shopping/ souvenirs</th>
<th>Recreational services</th>
<th>Others</th>
<th>Total reduced spending</th>
<th>Pct by segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic tourism</td>
<td>4,755</td>
<td>22,342</td>
<td>22,825</td>
<td>15,796</td>
<td>1,971</td>
<td>4,709</td>
<td>72,397</td>
<td>36%</td>
</tr>
<tr>
<td>International tourism</td>
<td>56,000</td>
<td>25,470</td>
<td>14,331</td>
<td>18,829</td>
<td>4,108</td>
<td>10,711</td>
<td>129,449</td>
<td>64%</td>
</tr>
<tr>
<td>Total</td>
<td>60,755</td>
<td>47,812</td>
<td>37,156</td>
<td>34,625</td>
<td>6,079</td>
<td>15,420</td>
<td>201,846</td>
<td>100%</td>
</tr>
</tbody>
</table>

Percentage of total spend
- Domestic tourism: 30%
- International tourism: 24%
- Others: 18%
- Shopping/souvenirs: 17%
- Recreational services: 3%
- Transport: 8%
- Food and beverage: 100%

Table 3: Distribution of reduced international and domestic tourism spending across 34 provinces, January to September 2020 (unit: billion Rp).

<table>
<thead>
<tr>
<th>Province</th>
<th>Domestic tourism spending losses</th>
<th>International tourism spending losses</th>
<th>Total tourism losses</th>
<th>Ranking of tourism losses*</th>
<th>Pct of losses contributed by the international market</th>
<th>Ranking of international tourism contribution**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aceh</td>
<td>919</td>
<td>280</td>
<td>1,198</td>
<td>17</td>
<td>23%</td>
<td>21</td>
</tr>
<tr>
<td>North Sumatra</td>
<td>2,243</td>
<td>4,869</td>
<td>7,112</td>
<td>8</td>
<td>68%</td>
<td>9</td>
</tr>
<tr>
<td>West Sumatra</td>
<td>1,287</td>
<td>3,337</td>
<td>4,624</td>
<td>10</td>
<td>72%</td>
<td>7</td>
</tr>
<tr>
<td>Riau</td>
<td>897</td>
<td>168</td>
<td>1,065</td>
<td>19</td>
<td>16%</td>
<td>25</td>
</tr>
<tr>
<td>Jambi</td>
<td>189</td>
<td>109</td>
<td>298</td>
<td>29</td>
<td>37%</td>
<td>17</td>
</tr>
<tr>
<td>South Sumatra</td>
<td>906</td>
<td>185</td>
<td>1,091</td>
<td>18</td>
<td>17%</td>
<td>24</td>
</tr>
<tr>
<td>Bengkulu</td>
<td>336</td>
<td>44</td>
<td>380</td>
<td>28</td>
<td>11%</td>
<td>30</td>
</tr>
<tr>
<td>Lampung</td>
<td>674</td>
<td>108</td>
<td>782</td>
<td>22</td>
<td>14%</td>
<td>26</td>
</tr>
<tr>
<td>Bangka Belitung</td>
<td>409</td>
<td>135</td>
<td>543</td>
<td>24</td>
<td>25%</td>
<td>20</td>
</tr>
<tr>
<td>Kepulauan Riau</td>
<td>2,033</td>
<td>9,005</td>
<td>11,027</td>
<td>6</td>
<td>82%</td>
<td>3</td>
</tr>
<tr>
<td>Jakarta</td>
<td>11,984</td>
<td>28,135</td>
<td>40,119</td>
<td>2</td>
<td>70%</td>
<td>8</td>
</tr>
<tr>
<td>West Java</td>
<td>10,667</td>
<td>7,107</td>
<td>17,774</td>
<td>4</td>
<td>40%</td>
<td>15</td>
</tr>
<tr>
<td>Central Java</td>
<td>10,251</td>
<td>1,434</td>
<td>11,685</td>
<td>5</td>
<td>12%</td>
<td>29</td>
</tr>
<tr>
<td>Yogyakarta</td>
<td>5,491</td>
<td>5,200</td>
<td>10,690</td>
<td>7</td>
<td>49%</td>
<td>11</td>
</tr>
<tr>
<td>East Java</td>
<td>12,172</td>
<td>6,743</td>
<td>18,915</td>
<td>3</td>
<td>36%</td>
<td>18</td>
</tr>
<tr>
<td>Banten</td>
<td>1,316</td>
<td>367</td>
<td>1,683</td>
<td>15</td>
<td>22%</td>
<td>22</td>
</tr>
<tr>
<td>Bali</td>
<td>6,389</td>
<td>48,636</td>
<td>55,025</td>
<td>1</td>
<td>88%</td>
<td>2</td>
</tr>
<tr>
<td>West Nusa Tenggara</td>
<td>755</td>
<td>6,263</td>
<td>7,017</td>
<td>9</td>
<td>89%</td>
<td>1</td>
</tr>
<tr>
<td>East Nusa Tenggara</td>
<td>781</td>
<td>931</td>
<td>1,712</td>
<td>14</td>
<td>54%</td>
<td>10</td>
</tr>
<tr>
<td>West Kalimantan</td>
<td>510</td>
<td>1,675</td>
<td>2,186</td>
<td>12</td>
<td>77%</td>
<td>5</td>
</tr>
<tr>
<td>Central Kalimantan</td>
<td>597</td>
<td>95</td>
<td>692</td>
<td>23</td>
<td>14%</td>
<td>27</td>
</tr>
<tr>
<td>South Kalimantan</td>
<td>706</td>
<td>107</td>
<td>813</td>
<td>21</td>
<td>13%</td>
<td>28</td>
</tr>
<tr>
<td>East Kalimantan</td>
<td>426</td>
<td>1,755</td>
<td>2,181</td>
<td>13</td>
<td>80%</td>
<td>4</td>
</tr>
<tr>
<td>North Kalimantan</td>
<td>68</td>
<td>61</td>
<td>130</td>
<td>33</td>
<td>47%</td>
<td>12</td>
</tr>
<tr>
<td>North Sulawesi</td>
<td>642</td>
<td>422</td>
<td>1,064</td>
<td>20</td>
<td>40%</td>
<td>16</td>
</tr>
<tr>
<td>Central Sulawesi</td>
<td>421</td>
<td>99</td>
<td>520</td>
<td>25</td>
<td>19%</td>
<td>23</td>
</tr>
<tr>
<td>South Sulawesi</td>
<td>1,806</td>
<td>1,575</td>
<td>3,381</td>
<td>11</td>
<td>47%</td>
<td>13</td>
</tr>
<tr>
<td>Southeast Sulawesi</td>
<td>278</td>
<td>231</td>
<td>509</td>
<td>26</td>
<td>45%</td>
<td>14</td>
</tr>
<tr>
<td>Gorontalo</td>
<td>228</td>
<td>21</td>
<td>249</td>
<td>30</td>
<td>8%</td>
<td>34</td>
</tr>
<tr>
<td>West Sulawesi</td>
<td>209</td>
<td>26</td>
<td>235</td>
<td>31</td>
<td>11%</td>
<td>31</td>
</tr>
<tr>
<td>Maluku</td>
<td>23</td>
<td>68</td>
<td>91</td>
<td>34</td>
<td>74%</td>
<td>6</td>
</tr>
<tr>
<td>North Maluku</td>
<td>139</td>
<td>16</td>
<td>154</td>
<td>32</td>
<td>10%</td>
<td>32</td>
</tr>
<tr>
<td>West Papua</td>
<td>285</td>
<td>111</td>
<td>397</td>
<td>27</td>
<td>28%</td>
<td>19</td>
</tr>
<tr>
<td>Papua</td>
<td>1,374</td>
<td>132</td>
<td>1,506</td>
<td>16</td>
<td>9%</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>72,397</td>
<td>129,449</td>
<td>201,846</td>
<td>64%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: pct = percentages; * 1 = most heavily impacted; ** 1 = the highest percentages.
3.2. Impacts by Sector and Province

Total Impact. Reduced tourism spending adversely affects the economy in two ways.

“Fewer customers means fewer job opportunities, lower wages to the existing employees, decreased business profits and fewer tax dollars paid to the government. And then the reduction in tourism revenue then impacts the supply chain – a hotel with low occupancy will reduce, for example, orders for vegetables and fruits for breakfast, laundry services and the purchase of cleaning products.”

So there is the first direct impact which is typically measured by GDP, employment and personal income. The secondary impact results in suppliers facing the same process of reduced jobs, fewer payments to employees, lower business profits and less tax paid. This flows on to the suppliers of suppliers. This loss in the supply chain is referred to as the indirect effect. The sum of the direct and indirect effects gives a complete picture of the impact of reduced tourism demand.

Given an estimated 202 trillion rupiah reduction in visitor spending during January-September 2020, the direct economic impact included 100 trillion rupiah (US$71 billion) reduction in GDP, 1.8 million jobs at risk and a 47.5 trillion rupiah (US$3.4 billion) cutback in salary among tourism employees (Table 4). The impact on the supply chain of decreased tourism activity led to a 1.3 percent fall in GDP, 2.6 percent drop in nationwide employment, and a 1.7 percent loss in personal income.

Table 4: Economic impacts of reduced tourism to the Indonesian economy, January to September 2020.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Reduced GDP (billion Rp)</th>
<th>Pct of national GDP</th>
<th>Affected employment (000’s)</th>
<th>Pct of national employment (2019)</th>
<th>Affected personal income</th>
<th>Pct of national income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct effect</td>
<td>100,481</td>
<td>0.60%</td>
<td>1,799</td>
<td>1.40%</td>
<td>47,529</td>
<td>0.90%</td>
</tr>
<tr>
<td>Total effect</td>
<td>208,248</td>
<td>1.30%</td>
<td>3,384</td>
<td>2.60%</td>
<td>88,655</td>
<td>1.70%</td>
</tr>
</tbody>
</table>

Note: pct = percentages

It is important to note that the MRIO model assumes a linear relationship between reduced tourism spending and unemployment. If one billion rupiah in tourism spending supports 15 jobs, a reduction of 10 billion rupiah spending in the model will be expected to lead to 150 job losses. Tourism businesses may not, in reality, lay off people in direct proportion to their business losses, but it is very likely these positions are at high risk of being laid off, converted to part-time or being rotated to different business entities. In this report, these job estimates provide a proxy for the likely impact on employment.

Across the economy, accommodation and food services suffered the biggest losses, accounting for 36 percent and 31 percent of total GDP and employment reduction respectively, followed by trade, other services, and transport sectors (Figure 2). With a strong connection to the tourism industry, the agriculture and manufacturing sectors have also been affected, with a GDP drop of 7 percent and 10 percent, respectively.

Since accommodation and food services have been heavily affected, we examined the influence of the pandemic within the sector. During the study period, it has been estimated that one million workers in this sector were at risk, with an estimated loss of Rp 24.7 trillion rupiah of personal income. This translated to a staggering 11.5 percent of total hotel and food service employees at risk, with 13.6 percent of their income reduced.
**Regional impact.** Since tourism demand is highly concentrated in specific provinces, a regional analysis of economic impact was necessary. As expected, impacts were heavily felt by regions with a high level of tourism. Five provinces experienced GDP losses of more than 2 percent, and four provinces reported a reduction of 1.2-2 percent (Figure 3). The most affected region, Bali, experienced 51 trillion rupiah GDP losses, accounting for 22.5 percent of GDP (total wages, profits, tax and depreciation) in the province (Figure 4). The second most-affected region was Jakarta, with an estimated GDP loss of 40.3 trillion rupiah. However, due to its capital status and complex and large economic system, this tourism crisis accounted for only a 1.7 percent GDP reduction in Jakarta, allowing the destination to better absorb the economic shock.

![Figure 2: Economic impact of tourism losses (%) on GDP and employment by major sectors.](image1)

![Figure 3: GDP losses (percentages) across 34 Indonesian provinces.](image2)

![Figure 4: GDP losses and percentage losses for the top 10 provinces (%).](image3)
The regions most impacted by employment losses rank slightly differently (Figure 4). Most tourism-related job losses were reported in Bali (819,621), West Java (454,148), East Java (287,633), Central Java (286,953), Yogyakarta (241,847), Jakarta (241,488) and West Nusa Tenggara (204,201). These seven provinces comprised 75 percent of total tourism-related unemployment. Bali faced extreme difficulties in retaining tourism-related positions, with one in every three threatened by reduced demand. While several provinces had more than 10 percent of local employment at risk, including Yogyakarta (11.3 percent) and Kepulauan Riau (11.3 percent).

“Bali faced extreme difficulties in retaining tourism-related positions, with one in every three threatened by reduced demand. While several provinces had more than 10 percent of local employment at risk…”

Figures 4 and 5 demonstrate the impact of the tourism crisis on GDP and employment. We were able to conclude that Bali, Yogyakarta and Kepulauan Riau have been much more economically vulnerable to falling tourism demand.
3.3. IMPACTS BY GENDER, EDUCATION, AGE AND INCOME

One important objective of this study is to analyse job losses across demographic groups to better understand the impact of the tourism crisis. We feel employment data represent the best proxy, as they capture effects on job security, which has a profound influence on individual, family and ultimately societal welfare. COVID-19’s impact has rendered several groups much more economically vulnerable, including women, youth (15-27 years old), lower-educated workers (whose highest level of education is elementary school) and the lower-paid (monthly income up to one million rupiah).

Nationally, the 202 trillion rupiah (US$14 billion) reduction in tourism spending has put 3.4 million jobs at risk, representing 2.6 percent of national total employment. ‘Jobs at risk’ implies these positions were much more likely to be laid off or converted from full-time to part-time. Of these 3.4 million jobs, 1.63 million were held by women; 755,000 by youth (15-27 years old); 1.12 million by lower-educated workers; and 541,000 jobs were in low-wage occupations. On a percentage basis, the collapse of tourism has placed 3.1 percent of female workers, 2.7 percent of youth employees, 3.1 percent of lower-educated staff and 2.3 percent of low-income workers in a situation where their job risk is extremely high.

The following four figures provide a more detailed look. The absolute number is the number of positions affected, while the percentage compares affected positions (eg, female workers affected by reduced tourism) with total employees in the same group (eg, all female workers).

Gender. Globally, women have been found to be more affected by the tourism crisis than men. This is also the case in Indonesia, where 16 out of 34 provinces reported a higher number of jobs held by women were at risk than jobs held by men. The highest number of women’s jobs at risk were reported in Bali, West Java, Central Java and East Java. In terms of vulnerability, Bali, Kepulauan Riau, Yogyakarta and West Nusa Tenggara were found to be the key spots, with more than 10 percent of total women-held positions under threat. In Bali, a staggering one-in-three female workers and entrepreneurs were highly impacted, creating both financial and social problems for the community.
Youth. The influence on youth employment has also been found to be significant. Nationally, 22 percent of the affected workforce was 15-27 years old. This ratio was much higher in 21 provinces, indicating that youth workers in these areas were more prone to job losses. In terms of absolute numbers, most youth-filled positions at risk were reported in Bali, West Java, Central Java and East Java. In percentage terms, Bali, Yogyakarta, Kepulauan Riau and West Nusa Tenggara Barat were found to be most vulnerable, with more than 9 percent of total youth-held positions under threat. Retaining youth workers is especially important for Bali, as about 40 percent of young people have been on the brink of losing employment.

Low education. Workers with an education level of elementary school or lower, without exception, have been more affected in this tourism crisis. Nationally, 24 percent of the impacted workforce was lower-educated workers. This ratio was found to be much higher across 25 provinces, indicating that low-education staff, mostly in basic and front-line positions, were prone to job losses. Most low-education positions under threat were reported in Bali, West Java, East Java and Central Java. In terms of the unemployment ratio, Bali, Kepulauan Riau and Yogyakarta have been found to be most vulnerable, with more than 10 percent of lower-educated workers under threat.
Low income. Low-income workers, surprisingly, have been found to be less affected by the tourism crisis than other studies reported. This was evident by contrasting national total affected jobs (2.6 percent) with affected positions held by those with monthly income up to 1 million rupiah (2.3 percent). A possible explanation is that before COVID-19, those who worked in tourism, both directly and indirectly, had comparatively higher income than those who did not. The 2020 Labour Survey data showed that 24 percent of the total workforce had a monthly income below 1 million rupiah; in contrast, only 5 percent of employees in the accommodation and food service sector in Bali were in this category. The reduction of tourism demand therefore affected more of those in relatively higher-income groups.

The above discussions are based on two sets of results – the potential unemployment total and the possible unemployment rate. The first result draws attention to provinces with a large loss in tourism revenue. The second indicates the vulnerability of particular groups, sometimes from small regions. A high unemployment ratio implies strong tourism dependence. This has important implications for those at risk because the COVID-19 situation will make it much more difficult for them to find alternative employment in either the tourism industry, which has contracted significantly, or other sectors where their skill set may not satisfy job requirements. Groups with a high estimated unemployment rate have been identified below (Figure 10).

- Bali – 820,000 possible job losses, and the unemployment rate for youth, women, lower-educated and low-income workers exceeding 30 percent in the region
- Yogyakarta – 242,000 possible job losses, and the economic risks for women, youth and low-income workers being five to six times higher than the average across the country
- West Nusa Tenggara – 204,000 possible job losses, and the economic burdens expected to be more prominent for female workers and lower-educated workers with a 10 percent unemployment rate
- Kepulauan Riau – 114,000 possible job losses, and one in every six low-income and female workers expected to endure significant job and income losses
- Jakarta – 241,000 job losses. Youth and low-income workers at a relatively higher job risk.

“... The COVID-19 situation will make it much more difficult for them to find alternative employment in either the tourism industry, which has contracted significantly, or other sectors where their skill set may not satisfy job requirements.”

![Figure 10: The potential unemployment rate for demographic groups across five provinces.](image-url)
4.0. CONCLUSION AND RECOMMENDATIONS

Evidence-based policy is required to manage complex socioeconomic systems and related tourism impacts (Cvitanovic et al., 2016; UNWTO, 2014). Evidence-based policymaking refers to policy decisions being informed by rigorous research and high-quality empirical evidence from a balanced perspective. This approach to policymaking helps mitigate the risk of idiosyncratic decisions and leads to a better long-term outcome.

To effectively manage COVID-19 related impacts, we need strong and valid evidence to guide policy measures towards vulnerable groups, to allow an inclusive recovery. This project fills this information gap by providing a high-resolution economic analysis mapping economic impact to both geographic region and socio-demographic status. It presents the first detailed regional-level analysis of the direct and indirect effects of reduced tourism.

COVID-19 related restrictions and risk aversion saw a 70 percent decline in international tourism and a 47 percent contraction in domestic tourism in Indonesia between January-September 2019 and January-September 2020, with a resulting revenue loss of 202 trillion rupiah (US$14 billion). Based on the multi-regional input-output model (provided by the Ministry of Finance) and tourism satellite account (Ministry of Tourism), the study estimated the reduced tourism spending has resulted in a 208 trillion rupiah dip in GDP (1.6 percent), 88 trillion rupiah loss of personal income (1.7 percent) and a potential 3.4 million job losses (2.6 percent).

Of those jobs affected, 62 percent were in four provinces: Bali (32 percent), Kepulauan Riau (11 percent), Yogyakarta (11 percent) and West Nusa Tenggara Barat (8 percent). Among these at-risk workers, 1.63 million were women; 755,000 were youths (aged 15-27); 1.12 million were lower-educated workers; and 541,000 were low-wage. This translates to 3.1 percent of female workers, 2.7 percent of youth employees, 3.1 percent of lower-educated staff and 2.3 percent of low-income workers who are facing high levels of job insecurity. These figures support the conclusion that women, youth and lower-educated workers in Indonesia are disproportionately affected by the pandemic. Unexpectedly, the impact on low-income workers has been less significant. This may be because relatively higher wages are offered in the accommodation and food service sector in many tourism-dependent provinces, especially in Bali and West Nusa Tenggara. Working in tourism before COVID-19 generated higher income relative to other sectors of the economy. Thus, when tourism demand disappears, affected positions tend to be in a higher income group.

“These figures support the conclusion that women, youth and lower-educated workers in Indonesia are disproportionately affected by the pandemic.”
4.1. RECOMMENDATIONS

In response to the pandemic in 2020, Indonesia’s government allocated 695.2 trillion rupiah (US$47 billion) in stimulus funds up to September 2020, including support for the tourism industry and low-income workers. Not all was disbursed due to bureaucratic red tape and/or unreliable data (The Jakarta Post, 2020). This study has identified specific vulnerable groups at the regional level, with recommendations for further support discussed below.

4.2. FOCUSING POLICYMAKING ON THE REGIONAL LEVEL

Overall, we identified five provinces with specific social groups who have been significantly impacted, including Bali (women, youth and lower-educated workers); Yogyakarta (women, youth and low-income workers); Kepulauan Riau (women and low-income workers); West Nusa Tenggara (women, youth and lower-educated workers); and Jakarta (youth and low-income workers). This information allows specific relief and subsidy programs to be targeted at affected businesses and workers. Directing central funding to the regional level to assist with wage compensation, skills training or job relocation will provide much-needed support to ensure the livelihoods of those communities.

Promoting domestic tourism and community welfare

The pandemic has not only caused loss of income and jobs, but led to many families falling below the poverty line. A “domestic-led” strategy promoting domestic travel, especially to regions heavily dependent on international tourism before COVID-19, will help fill empty rooms and seats. A national marketing campaign promoting Bali, Kepulauan Riau, West Java, East Java, West Nusa Tenggara and Yogyakarta as destinations for domestic travel may help encourage people who had planned to travel abroad to stay at an Indonesian destination. A strategic plan to leverage existing domestic travel demand and convert outbound journeys to domestic trips will boost local businesses. Government support for creative small-scale (niche) tourism products run by local businesses is also recommended. These businesses tend to support local employment with extensive integration of the area’s culture, arts, souvenirs and gastronomy, delivering more benefits to the local suppliers.

Tourism recovery

The tourism industry has been a driver of economic growth in Indonesia. The road to recovery requires solidarity and collaboration across the industry and destinations’ local communities as well as public and private partners such as Wonderful Indonesia, the Indonesia Hotel and Restaurant Association and the Indonesian Chamber of Commerce and Industry. Stakeholder collaboration supports tourism recovery plans at the regional level. People are at the centre of the recovery. Programs are needed for vulnerable people to be retrained, so they can gain new qualifications and prepare to regrow the tourism workforce through learning, innovation and digitalisation. For example, although many Indonesian women are digitally connected, business owners’ and workers’ digital skills continue to lag (Bentley, 2020). Capacity building and support through vocational, on-the-job or online training are a must for tourism-related employees, particularly for those with limited access or means to do so otherwise. Aligned with sustainable health and safety measures regulated by government and industry, such training offers opportunities to upskill, reskill and multi-skill current staff and increase the resilience of the local tourism sector. This will create a win-win situation, with high-quality tourism experiences and staff ready when tourism returns (CREST, 2020).

In restarting tourism in the post-COVID-19 era, the United Nations (UN, 2020) has recommended five primary areas of focus, with people at the centre. The priority is to mitigate socioeconomic impacts, especially for women and vulnerable groups. Our study contributes to this goal by identifying marginalised and vulnerable communities who have been hard hit by the tourism decline, so that those who have endured the greatest economic hardship can be best helped.
5.0. REFERENCES


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